(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 24 June 2004 (24.06.2004)

PCT

(10) International Publication Number WO 2004/053194 A1

(51) International Patent Classification⁷: 22/53, 22/60, 22/68, C09D 1/00

C23C 22/48,

(21) International Application Number:

PCT/AU2003/001644

(22) International Filing Date: 9 December 2003 (09.12.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2002953190

9 December 2002 (09.12.2002) AU

(71) Applicant (for all designated States except US): COM-MONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION [AU/AU]; Limestone Avenue, Campbell, Australian Capital Territory 2601 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): COLE, Ivan, Stewart [AU/AU]; 63 Pakington Street, Kew, Victoria 3101 (AU). FULLSTON, Damian [AU/AU]; 30 Albert Place, Dingley, Victoria 3172 (AU). FURMAN, Scott, Anthony [CA/AU]; 13 Sweet Wattle Drive, Cranbourne South, Victoria 3977 (AU). MUSTER, Tim, Harvey [AU/AU]; 2/27 Kionga Street, Clayton, Victoria 3168 (AU). NEUFELD, Aaron, Kiffer [CA/AU]; 2/29 Sherwood Avenue, Chelsea, Victoria 3196 (AU). CHAN,

Frankle, Kok, Wai [AU/AU]; 4 Solway Close, Ferntree Gully, Victoria 3156 (AU). SHERMAN, Natalle [AU/AU]; 4/19 Narong Road, North Caulfield, Victoria 3161 (AU).

- (74) Agents: DARK, Andrew et al.; Davies Collison Cave, 1 Nicholson Street, Melbourne, Victoria 3000 (AU).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: AQUEOUS COATING SOLUTIONS AND METHOD FOR THE TREATMENT OF A METAL SURFACE

(57) Abstract: A coating solution for providing a corrosion resistant coating to a metal surface including: a water soluble silicate; and at least one metal ion (X) selected from those having a valence of less than or equal to +4; wherein said coating solution forms an aqueous silicate-X network such that the silicate remains soluble, and wherein on contact with a metal surface (Y) a coating comprising of silicate-X and Y is formed.